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EDITORIAL NOTE.

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A " HUMAN NEEDS " DIET IN NOVEMBER 1943.

Our half-yearly survey of the cost of a ' human needs ' diet in war time, based on data collected in the city of Oxford, was carried out for the sixth time in November 1943. The diet for a family of five persons —husband, wife, and three children of school age—that could be purchased in any part of the town, is set out in Table I. It will be noticed that the diet differs considerably from that which we compiled last April, mainly because of changes in rationing and changes in the prices of certain rationed foods. The supply of cheese and of household milk had been reduced, and that of sugar, or jam, and of dried eggs, had been increased. The price of sugar had gone up by 1d. a lb. since April, while the price of a packet of dried eggs had fallen by 6d. The price of margarine had to be taken as 9d. a lb., as compared with 7d. in April, when half of it was assumed to be ' standard ' and half ' special ' margarine, a lb. of the former costing 5d. and of the latter 9d. ' Standard ' margarine is now no longer available in the shops, and the grocers questioned stated that the brand was not wanted by their customers.

The reduction in the cheese ration from 4 oz. to 3 oz. per person per week, and the reduced supply of household milk—both of which are cheap sources of animal protein—can be made good by an increased consumption of bacon and dried eggs. This substitution, however, raises the cost of the diet. Dried fruit has been omitted in our schedule for November as set out in Table I, since there was a plentiful supply of cooking apples which, though more expensive as regards calorific value than the dried fruits of our war time diet, prunes and apple rings, were widely bought, because they helped to enliven the family menu. There

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TABLE I

Weekly Diet for a Family of 5 Persons

		Quantlty	Price p. Unit*		Changes since April 1943			
					Quantity	Outlay		
(A)	RATIONED FOODS		s.	d.			s.	d.
1	Meat	7 lb.		10	+ 6 oz.		-	-
2	Bacon	1 lb. 4 oz.	1	6	+1 lb.	+	1	6
3	Margarine	1 lb. 14 oz.		9	- -	+		3¾
4	Lard	10 oz.		9	- -		-	-
5	Sugar	3 lb 12 oz.		4	+1 lb 4 oz.	+		7½
6	Jam	1 lb. 4 oz.		11	- -		-	-
7	Tea	8 oz.	2	8	- -		-	-
8	Cheese	15 oz.	1	1	— 5 oz.	—		4
9a	Eggs, shell ..	1 egg		2	- -		-	-
9b	*Ditto*, dried ..	1¼ packet †	1	3	+ ¼ packet	—		2
10a	Peas, and lentils, split	1 lb.		5	- -		-	-
10b	Beans	1 lb.		5	- -	+		1
11	Rice, etc.	1 lb.		6	- -		-	-
12	Prunes	- -	-	-	—1 lb.	—		9
13	Household Milk ..	⅝ tin ‡		8	—⅝ tin	—		5½
	Outlay on Group (A)		17	10¾		+		9¾
(B)	UNRATIONED CARBOHYDRATE FOODS							
14	Bread	17 lb.		2¼	— 8 oz.	—		1¼
15	Flour	2 lb. 8 oz.		2½	- -		-	-
16	Potatoes	34 lb. 8 oz.		1	- -		-	-
17	Oatmeal	2 lb. 8 oz.		3¼	- -		-	-
	Outlay on Group (B)		7	3¼		—		1¼
(C)	MILK AND VEGETABLES							
18a	Milk, ordinary ..	14 pt.		4½	- -		-	-
18b	Ditto, school ..	5 pt.		1½	- -		-	-
19a	Carrots, Swedes, turnips	7 lb.		1¾ §	- -		-	-
19b	Greens	7 lb.		3	- -		-	-
	Outlay on Group (C)		8	7¾	- -		-	-
(D)	OTHER FOODS							
20	Sausage Meat, Beef	1 lb.		7	- -		-	-
21	Fish	- -	-	-	— 12 oz.	—		7½
22	Cocoa	4 oz.	1	4	- -		-	-
23	Condiments ..	- -		4	- -		-	-
24	Cooking Apples ..	1 lb.		6	+1 lb.	+		6
	Outlay on Group (D)		1	9		—		1½
	Total Outlay ..		35	6¾		+		7

* Dried eggs, price per packet ; household milk, price per tin ; other milk, price per pint ; eggs in shell, price per egg ; condiments, total outlay ; all other foods, price per lb.

† Equivalent to 15 eggs.

‡ Equivalent to 2½ pints skimmed milk.

§ Average price.

seemed the more justification for including fresh apples even into a low cost diet, since the family has been assumed to take instead of their jam ration sugar, which is much cheaper, and only purchase their supplementary allowance of jam. This increase in the combined rations of sugar and jam is merely a temporary concession. While it lasts, it gives to each person per week ½ lb. of sugar, ¼ lb. of jam, and another ¼ lb. of either sugar or jam. When this additional ¼ lb. is cancelled, the nutritional loss for a family of 5 persons of 1¼ lb. of sugar per week can be compensated by adding to the diet 1¾ lb. of bread and ¼ lb. of syrup, which at the prices ruling in November, will cost about 1d. more than the sugar.

Cheap fish could be bought in Oxford only very occasionally without queuing up for it ; hence we have excluded it from our diet schedule. Greens were scarce, and there was no seasonal fall in their price, as compared with the price of spring greens in April. As will be seen from Table I, the total cost of the diet in November was 35s. 6¾d.,[1] as against 34s. 11¾d. for the diet in April ; that is, it was dearer by about 1½ per cent. The outlay of 35s. 6¾d. does not represent the minimum cost, but it stands for the lowest cost at which a housewife might reasonably be expected to purchase such a diet in any part of the town. Quite a number of the foods were offered in several shops at prices lower than those tabulated here ; thus, jam was sold at 1s. 9d. for 2 lb., dried beans at 4d. a lb., cocoa at 1s. a lb., cooking apples at 4d. or 5d. a lb., and potatoes at 6d. for 7 lb.

The foods rationed on 'points' that are shown in Table I—peas, lentils, beans, and rice—only require about 7 'points,' while the family have at their disposal 25 'points' per week. In Table II there are set out supplementary foods that might be obtained with the remaining 'points.' If they are bought in addition to the diet given in Table I, the family's calorific and protein intake are increased beyond their standard requirements, and their outlay per week is raised by 1s. 9d. We might, indeed, have substituted these 'points' foods for other foods in Table I ; apple rings could take the place of cooking apples and tinned fish replace part of the bacon. Yet it seems unlikely that at the time of our survey a housewife would have chosen to do this. Her reasons for preferring fresh apples to dried ones have already been stated. As for bacon, a fair supply of it was most useful for preparing tasty dishes with the legumes and dried eggs.

TABLE II

Supplementary 'Points' Foods

	Quantity	Outlay
Apple Rings	1 lb.	9d.
Syrup	8 oz.	4d.
Tinned Fish ..	8 oz.*	8d.
Total		1s. 9d.

*Approximately.

We have calculated the nutritional intake from the foods given in Table I by means of two different sets of scales of 'man' values, and, also, two different sets of tables of nutritional values. In the first instance, we have used the scale and tables usually employed by us; secondly, we have applied data that were put at our disposal by the Ministry of Health. Our own scale of 'man' values is intended as a broad measurement of relative family needs, of food as well as of all household expenditure, while the Ministry of Health scales were designed specifically to gauge the nutritional requirements of the individual in the several age and sex groups. As regards the tables for measuring nutritional values, those usually applied by us show gross values, *i.e.* the nutritional values of the several foods as bought, while the tables employed by the Ministry of Health give net values, making allowance for waste in preparing and cooking the foods. Obviously, the requirements per ' man ' will be lower if measured by the latter set of tables than if measured by the former. In Table III will be found the ' man ' values of the several members of the family compiled by means of the scales of the Ministry of Health and of our own scale, while in the bottom row there is shown the corresponding nutritional requirements per ' man ' per day. These data should be compared with those in Table IV. It will be seen that, except for the intake of calcium, the diet is adequate, with a margin of safety as regards the intake of protein and iron. There seems little possibility of increasing by much the family's intake of calcium, for even if all the bread and flour consumed

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[1] 9s. 6d. per 'man' per week, if the 'man' value of the family is taken as 3.75.

TABLE III

Nutritional Requirements Expressed in ' Man ' Values

	Institute Scale	Ministry of Health Scale			
	Calories & Protein	Calories	Protein	Calcium	Iron
Husband	1.00	1.00	1.00	1.00	1.00
Wife	0.85	0.83	0.86	1.00	1.00
Child, 12	0.70	0.70	0.93	1.75	1.30
ditto, 9	0.60	0.70	0.93	1.75	1.30
ditto, 6	0.60	0.50	0.71	1.63	0.80
'Man' Value of Family ..	3.75	3.73	4.43	7.13	5.40
Requirements* per 'Man' per Day	3300 100gm.	3000	70gm.	0.8 gm.	10mgm

* Gross values for the Institute scale, net values for the Ministry of Health scale.

TABLE IV.

Nutritional Intake from Weekly Diet for a Family of 5 Persons (Nov. 1943) per 'Man' per Day

Scale applied	Calories	Total Protein	Animal Protein	Calcium	Iron
		gm.	gm.	gm.	mgm.
Institute	3300	102	49	—	—
Ministry of Health ..	3100	92	38	0.5 (0.6)*	17

* Calcium fortified bread and flour.

TABLE V.

Main Sources of Calcium in Human Needs Diet

	% of Total Calcium	
	Bread & Flour plain	Bread & Flour C fortified
Bread and Flour ..	6.4	20.4
All Milk	57.2	48.6
Cheese	13.0	11.1
Greens	5.7	4.8
Potatoes	4.3	3.7
Carrots	3.5	3.0
Dried Legumes ..	2.9	2.4
Oatmeal	2.6	2.2
Other Foods	4.4	3.8
Total	100.0	100.0

is calcium fortified, it will only raise the total amount per 'man' per day from 0.5 to 0.6 grammes. Table V makes it evident that nothing short of a much larger consumption by the family of milk and cheese could increase their intake of calcium by the required 50 or 33 per cent. The supplementary foods shown in Table II supply only very small amounts of both calcium and iron; they yield, however, per 'man' per day about 100 calories and from 1 to 2 grammes of animal protein.

T. Schulz.

COMPENSATION AND PUBLIC BOARDS

(1) It is generally agreed that monopoly pricing should be eliminated and the imperfections in competition as far as possible mitigated. One school of thought maintains that public ownership could not successfully achieve this, and proposes a dissolution of monopolies. In fields where monopoly has come to be established because of the economies of large-scale enterprise the dissolution of the monopolist firm would reduce productivity. In this case the first of the remedies would not be in the public interest, because the monopoly price might be lower than the competitive one after the abandonment of large-scale production methods. But even if monopoly is not due to that cause but to trustification without rationalisation, to cartel or other agreements, the dissolution of the diverse combinations does not necessarily remedy the position. For if the number of producers or distributors is sufficiently small (and in practice it usually is even in the case of retail shops, for with decreasing size of the firm the scope of its potential competition and therefore the number of its potential competitors also diminishes) the absence of a formal agreement need not prevent tacit understandings (e.g. price leadership). Having learnt the lesson that competition does not maximise profits it is at least doubtful that mere *negative* measures will impel entrepreneurs to take *positive* actions likely to have unfavourable consequences on themselves.

Those who view monopolistic inefficiency with some alarm are ready to go further in implementing this policy and are prepared to undertake positive price control. Apart, however, from the technical difficulties in carrying out this policy[1] an important further problem arises. The reduction of price by control would completely alter the existing profit structure of the industry and therefore its capitalised value, i.e. the value of its shares on the stock exchange, which is based on profits which *include* the monopoly profit. State regulation of price which would eliminate these monopoly profits would reduce the capitalisation of those firms *pari passu*. Hence there will be spirited objection against any such price control.[2] Many shareholders acquired their interest at the inflated values without due knowledge of this risk. In many instances it would be found that labour itself would be opposed to the abolition of monopoly because as a shock effect their wages would come under pressure, especially since in many industries the wage level bears some relationship to the price of the product. The forces of opposition may be strong enough to defeat reform, however, urgently needed from the point of view of restoring better national competitiveness.[1]

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[1] Not the least of these difficulties is to induce rationalisation of production by negative measures. If under the protection of monopolistic practice the discrepancy between high and low cost producers is substantial the price policy which has to be enforced by the Government in order to maximise productivity implies the squeezing out of the former. Without some financial arrangements such policy is politically hardly feasible. The refusal of general compensation for lost sales and goodwill during this war resulted in spirited opposition to the policy of limiting civilian supplies and concentrating production in the most suitable units and thus substantially retarded war-economic mobilisation.

[2] Or what amounts to the same thing, State competition with existing firms by erecting factories etc. especially as these would be established on a basis of more up-to-date technical knowledge or low interest rates.

A remedy which would be generous to existing owners and at the same time would secure a price structure which excludes monopolistic elements and therefore secures optimum output for the community as a whole is a conversion of the industry into public ownership with full compensation to present owners.

(2) How is it that this argument does not seem to be used ; and why has the public in certain instances not benefited more from public ownership of industries or services taken over ? The answer is simple. Up till now the capitalisation of a new Government corporation or publicly owned Board has not been divorced from the compensation paid to the former private owners of the companies taken over. From this fact the following dilemma arose : (*a*) either the capitalisation of monopoly profits was (partly) squeezed out, in which case the former owners of the monopoly suffered capital losses, thus causing apprehension in all other industries in which the risk of nationalisation was not negligible.[2] (*b*) Or, as it happened in other instances, the full market capitalisation was paid in compensation and taken as the basis of the capitalisation of the new public corporation. In that case obviously no benefit could be derived by the public from taking over the industry,[3] except that arising out of the conversion to lower rates of interest of the original capital liability taken over by the Board, i.e. of the amount paid in compensation. If this was done compulsorily, then it amounted to nothing more than a special form of expropriation. If it was done by voluntary conversion due to the improvement of the credit standing of the liability, then indeed some benefit was attained by the intervention of the State, or State guarantee. But the saving was usually insufficient to make itself appreciably felt on the price policy of the new Board.[4]

(3) A simple solution could be found which has not hitherto been adopted because of certain misapprehensions about the nature and consequences of an increase of the National Debt : (*a*) the owners of

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[1] The ' squeezing ' of profit margins need not entail a fall in total profits if in consequence production expands *pari passu*. But the psychological effect will undoubtedly be unfavourable and in industries the demand for whose products is not elastic the losses will not be eliminated (i.e. other industries will benefit). The present paper is based on the (non-economic) assumption that the resistance against nationalisation and elimination of monopoly will be substantially diminished if the resulting direct losses are made good. It is taken as axiomatic that the gain to the community will in the (not too) long run be greater than this loss.

[2] e.g. in case of the nationalisation of coal royalties. However justified it might have been such precedents have increased resistance against public ownership.

[3] Rationalisation in contrast to change in price-policy could have been (at least theoretically) carried out without conversion to public ownership.

[4] It may be mentioned that the deflationary pressure on the price-level between 1919—33 also aggravated the position. Public ownership meant the conversion of equity into loan-capital. Hence the fall in prices increased the real burden of debt and thus counteracted the saving due to rationalisation of operations under public ownership.

the industry to be converted into public ownership should be compensated at the market price of their holdings, or upon the McGowan basis (cost of investment minus depreciation plus compensation for lost profit) whichever the higher. The compensation should be paid in cash or securities to be issued by the State at such levels that the new holdings of the investors should retain their value compared with their former shares and bonds.[1] Any necessary physical reorganisation of the industry should then be undertaken.[2]

(*b*) The capital of the new Board or Corporation should correspond only to that part of the total amount paid out in compensation which represents the replacement value of the rationalised physical capital of the reorganised industry or service. The price of the product, except perhaps in industries such as iron ore mines, which are wasting assets, can be fixed wholly independently to the previous existence of monopoly in that industry, indeed in all cases in which it is found desirable independently of the ruling marginal cost. We cannot in this context analyse the principles of pricing in the nationalised sector of a mixed (individualist-collectivist) economic system. In many instances (e.g. extractive industries) it will be necessary to fix prices at the (rising) marginal cost (or even higher if the conservation of the resource is desired). In other cases, especially in industries in which technical progress is rapid, it will be found desirable to surrender the producers' (temporary) surplus to consumers because a higher price could—in the longer run—be regarded as a non-budgetary indirect tax on consumption or on production. The essential feature of this proposal is that it frees the newly constituted Board from the accidental historical capitalisation which may have little if any relevance to the present or future position of the industry and its product.

(4) That portion of the compensation payment which has not been taken over by the newly constituted Board should be incorporated into the General Budget. The incidence of the new arrangement by which the tax-payer pays for this burden is not identical with the previous one and therefore no proof can be given that the new burden will be lower because it is mainly a direct as compared with an indirect tax. It is reasonable to suppose that there will be many cases in which this procedure will be appropriate because the impetus given to productivity and indirectly to business activity (provided the general budget does not weigh too heavily on risk bearing, which can be avoided) will be such that a greater part of the shifted burden, perhaps the whole of it, will probably be borne by an increase in the national real income.

(5) All new extensions of the industry could then be financed by

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[1] It will be found in most cases that the discrepancy between the cost of high and low cost producers is far more substantial than 'classical' economic theory would have us believe: low cost producers seldom engage in competition which actually forces high cost producers out of business. The latter are usually permitted to continue a parasitic existence while the low cost producer reaps a monopoly profit. Two main cases should be distinguished. The first is where the discrepancy is due to technical inefficiency of the high cost producer. In this case the plant of the high cost producers must be replaced and the final capitalisation of the public board cannot take place immediately as this process might take some time. The second case is where the discrepancy is due to 'natural' causes, e.g. the large differences in the case of working of coal seams. Here the problem is different.

[2] The *nominal* value of the new bonds will be lower for the risk-premium on the holding will be reduced.

raising capital either through the Treasury or with Treasury guarantees, i.e. at very low rates of interest. This would especially be the case if the Treasury were to charge the Board the average rate of interest paid out on the National Debt and not the marginal rate paid for a certain type of security given as part of the compensation to previous owners or issued to the specific purpose of the proposed extension (in this case probably long term securities).

It is sometimes contended that public Boards will, *ipso facto,* be less efficient than private companies. This charge does not seem to be well founded. There is no reason why managers of a public corporation should be more or less efficient than managers of a private company. Efficiency bonuses could be paid to them on an agreed basis on such saving in operation cost which is due to increased managerial efficency, i.e. not due to lower wages or new technical inventions which are not due to his initiative.

T. BALOGH.

ALUMINIUM PRICES

The greatly increased world capacity for the output of light metals and light alloys has brought about far-reaching changes in the importance and in the relative price level of various metals. While, for instance, the output of a traditional war metal such as copper increased by 50%, production of aluminium in U.K., U.S.A. and Canada has jumped by some 500% and that of magnesium, insignificant at the outbreak of war, is now over 200,000 tons in U.S.A. alone.

One would expect that the unique growth of aluminium, which to-day ranks in volume first among the non-ferrous metals, would have lowered the cost of production considerably ; the volume of expansion has, however, varied in the chief producing countries and costs have therefore been affected in different degrees. Recent prices take account of high cost producers and can be reduced if a shrinking demand were to be satisfied by low cost producers only. In this way aluminium may become a serious competitor of copper, the price level of which it has steadily approached. The price of copper in U.S.A. advanced a little during the war—from 11.12 cents per lb. in 1939 to 11.78 cents in 1943—while the price of aluminium fell from 20 cents to 15 cents and for a new grade of pig aluminium to 14 cents. U.S.A.'s second largest producer, the Reynolds Metal Co. stated that in their new plants they could produce aluminium at 10 cents per lb. In U.K. copper prices rose from £49 7s. 9d.[1] per ton in 1939 to £62[2] in 1943 and prices of aluminium also went up.

BRITISH ALUMINIUM PRICES

The price of virgin aluminium in U.K. had, before the war, been determined by the British Aluminium Co., a member of the International Aluminium Cartel. It stood at £94 a ton at the outbreak of war, was raised to £110 in December 1939 and remained at that level ever since. This controlled price refers to virgin aluminium only and not to the greater volume of secondary aluminium, i.e. metal obtained from scrap. The bulk of primary and secondary aluminium is used not in its pure

[1] C.i.f. U.K. ports.

[2] Delivered consumer's works.

form but alloyed with other metals. Existing price schedules serve, in view of the wide variety of alloys, only as approximations to the actual prices paid.

The above price quoted for virgin aluminium is not that paid by the Government to the producer but the price at which the Government resells the metal to manufacturers of aluminium goods. The price *paid* by the Government as sole buyer of virgin aluminium has been the object of discussions in Parliament and of Government investigations; about 3 years ago this price had been increased from £94 to £107; its present level is unknown, but is based on current costs and usual depreciation.[1]

Already the price of £94 had been the object of criticism[2] and authorities were quoted which thought a price of £65—£70 as sufficient and profitable. But in the official statement[3] the price paid for home produced aluminium was defended as substantially below the world price. The problem was again brought up in the Report of the Committee of Public Accounts for 1941, according to which such basic items of cost which were expected to fluctuate and thus liable to increase the price amounted to only £41 or 43.5% of the pre-war price of £94. The Committee could obtain no information as to the period within which the heavy capital expenditure which was said to be contributing to the rise in price was to be written off. Actually a large part of the capital increase of the Aluminium and Light Alloy industry had been provided by the Government. These loans were to be repaid only to the extent to which the war-time expansion of capacity was used after the war. If, for instance, production were to fall below the pre-extension level, the loans need not be repaid. Since no sinking funds had to be or have been set aside, the amortisation of the capital provided by the Government ought not to be included in present costs. The Government is entitled to recover the loans after 20 years by taking over the actual output from the extensions it has financed. But in this case it would have to find markets for the aluminium obtained; since the producers of aluminium manufactures belong largely to the sphere of interests of the producers of virgin aluminium, the Government might have difficulties in selling this output. It is thus doubtful if a rise in the price of aluminium can be justified by the argument of increased capital expenditure.

When the Public Accounts Committee published its report for 1942, it could report no progress on a settlement with regard to 'fair and reasonable prices' for supplies from the light alloy industry which it hoped for ever since 1940. Having expressed doubt why it should have been necessary to raise the pre-war price of aluminium it was informed that pre-war prices are normally not regarded as much of a guide in fixing current prices. The British Aluminium Co. in a new arrangement replacing the old one concluded with the Ministry of Supply broke completely away from pre-war costs and was calculating prices on current costs and depreciation 'on the usual basis.' The firm stated that they were very satisfied with the results of this new arrangement which was given to the Committee off the record.

An additional explanation for the increase in price was put forward, i.e. a rise in the cost of bauxite, one of the essential raw materials of aluminium, from £1 to £5 a ton for which the collapse of France was held responsible. Pre-war costs of bauxite from France and British Guiana were £1.08 and £2.43 respectively in 1939 and averaged £1.25 and £2.44 in the years 1935—1939. According to the above explanation the price of Guiana bauxite has at least doubled in course of the war. With four tons of bauxite necessary for one ton of virgin aluminium the costs of bauxite amounted to some £5 before the war and to £20 now per ton of virgin metal. The share of bauxite in total costs has correspondingly increased from 5.3% to 18.2%. A rise in the price of bauxite by some £3.75 per ton accounts for an increase of 15% on total pre-war costs of aluminium (£94) and of 34% on the fluctuating basic items (£41) ; the actual known price increase of aluminium of £13 (from £94 to £107) represents a rise of 13.8% and 31.5% respectively. If the price of bauxite cannot be lowered by a reduction in real costs, a Government subsidy on bauxite may prove cheaper than the increase in the price of aluminium with its cumulative effect on the final product.

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[1] See below.

[2] e.g. Mr. Vyvyan Adams, House of Commons, March 1940.

[3] By the then Minister of Supply, Mr. Leslie Burgin.

The inadequacy of present methods of price determination has been emphasised in the 14th Report of the Select Committee on National Expenditure which suggests that emphasis should be shifted from a check on profits to a close examination of real costs. ‘ Investigation should aim at establishing not merely what the costs have in fact been but what they ought to have been.’[1]

PRICES IN CANADA AND U.S.A.

Prices in Canada and U.S.A., the two countries responsible for the bulk of Allied production, developed differently from those in U.K. The price paid by the British Government to overseas producers is negotiated by the Canadian Government ; and the Canadian Ministry of Supply is entrusted with safeguarding British interests in the affairs of the Aluminium Co. of Canada, in which American shareholders have a controlling interest. The Canadian Company received financial support for their expansion programme from the British Government as well as from U.S.A. In 1941 the British Ministry of Supply had contracted for all exportable Canadian aluminium allowing for a share in to be allotted to U.S.A. While the terms of delivery of virgin aluminium U.K. remained unknown, some data have been published on sales to U.S.A.

In 1941 the Government of U.S.A. had concluded a contract for 170,000 tons of aluminium with the Canadian producers and made a substantial financial contribution towards the necessary expenditure on plant and equipment. The fulfilment of the contract was to be spread over several years. The contract was soon, in May 1942, doubled and later increased to 500,000 and then to 685,000 tons. Aluminium production in 1942 was estimated at 50,000 tons in U.K., 355,000 tons in Canada and 500,000 tons in U.S.A.[2] U.S.A. advanced £69,500,000 on the contracts and purchased the aluminium at prices valid in U.S.A., that is originally at 17 cents and later at 15 cents per lb. 80% of the above contracts have to be delivered at 15 cents, but the Canadian Company obtained in May 1943 certain concessions. Interest on the loans for which 2—3% had been charged was waived and the amortisation rate (6⅜ cents per lb.) was reduced. The prices paid in the U.S.A. contract seem to be considerably below those which Canadian aluminium producers had received before. The basic price of aluminium in Canada had, in November 1939, been advanced from 20 cents to 22 cents and in March 1941 to 23 cents.

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[1] The Report also points out that aircraft manufacturers paid prices for light metal fabrications not justified by reasonable profits for the suppliers and that in this way an inflationary effect was injected into war production. The aircraft firms pass the higher cost on to the Government with the additional permitted profit margin.

[2] See my article ‘ The Aluminium Revolution ’ BULLETIN No. 11, Vol. 1942.

U.S.A. has throughout the war followed a policy of reducing the price of aluminium. In March, August and November 1940 the price per lb. was lowered by 1 cent each time, and, from October 1941, by another 2 cents so that a 25% reduction—from 20 to 15 cents—took place. No further reduction occurred in the last two years, but a new grade of 99% pig aluminium was introduced early in 1943, at 14 cents per lb. Prices of fabricated aluminium ware have been lowered too, but as in Great Britain the price structure of manufacture, alloys and secondary metal is much more complicated than that of virgin aluminium. Still, no official Technical Cost Estimation as proposed by the Select Committee has been carried on in U.S.A. or U.K. The U.S.A. Government has invested some $760,000,000, owns 9 plants for producing aluminium and 45 plants for fabricating the metal and the output of these plants exceeds that of the great Alcoa (Aluminium Co. of America). But since the Government-owned factories are operated by private firms, the Government has to rely on information about costs given by the operating company.

The sharp drop in American prices of aluminium in 1940 and 1941 is due partly to the anti-trust policy of the U.S.A. Government which weakened the rather monopolistic position of Alcoa by financing competitors, partly to the expansion of output which lowered costs per unit. At that time, in 1941, production of aluminium had doubled, rising from about 150,000 tons in 1939 to some 300,000 tons. Since then, with the present rate of American annual output estimated at over 900,000 tons, output seems to have trebled. Production in Great Britain (amounting to 25,000 tons in 1939 and estimated at 50,000 tons in 1942) remained far below that achieved in U.S.A. or Canada.

Present prices for aluminium do not indicate how far they could be lowered in a competitive market. The opposite trend of aluminium prices, rising in U.K. and falling in U.S.A. with Canada exposed to both tendencies has led to wide discrepancies between official prices in U.S.A. and U.K. The U.S.A. price of 15 cents corresponds to £84 per long ton at the official exchange rate compared with the £110 in U.K. Assuming instead of $4 a $6-to-the-£-rate, believed lately to be in better accordance with the relative levels of controlled prices, the U.S.A. aluminium price would equal some £58. At this level American aluminium would be so much cheaper than British aluminium that the latter could hardly be protected by subsidies or tariff. The British copper price of £62 per ton would also unfavourably compare with the U.S.A. price of aluminium, the more so as aluminium is considered competitive if its price is not more than 20—30% above that of copper.

Seen in this perspective the suggestion contained in the Report of the Select Committee to aim not only at the prevention of excess profits but at the highest efficiency in real terms seems as valuable for a war economy as for the post-war period. S. Moos.

NOTE ON STEEL PRICES

In an earlier BULLETIN (Vol. 5, No. 9) the method of price fixing in the steel industry during the war was outlined. Owing to the scanty information available at that time, it was not possible to give a complete picture of the pricing system. Now a fuller account has been given in the recent Report of the Select Committee on National Expenditure on Methods of Settling Prices for War Stores (14th Report Session 1942—43, November 1943), which enables us to confirm the description contained in the article quoted. Even now there are certain questions of great importance which are still unanswered.

THE SYSTEM OF PAYMENT TO PRODUCERS.

We shall here try to outline the way in which producers in the heavy sector of the steel industry are paid. It will be seen that the system is complicated and it is possible that the following explanation is not exact in every detail. First of all there is a Control maximum price[1] for the various steel products, laid down in the Schedules of the Iron and Steel Control. These prices, which have remained constant since November 1940, are paid by the *consumers* of the steel products. At this price some producers might exceed the profits of the year 1936—7, which are called in this context their "standard" profits.[2] They would in this case pay Excess Profits Tax and be credited with the 20 per cent. post-war credit. Such firms we will call Class I firms. For the remaining firms the Control price would not bring standard profits. These firms, under present arrangements, are entitled to receive a price increase which is calculated in the following way.[3] The average costs of production of each product are calculated (quarterly) for the *whole industry*.[4] To the average cost is added a margin for profit (see below) and we arrive at a 'notional' price, which is higher than the Control price. Suppose now that this 'notional' price were paid to all firms, except Class I, which has already been dealt with. The result would be that some producers (Class II) would receive profits above their 'standard.' Class II producers do not, however, receive the full 'notional' price, but only a price sufficient to bring their profits up to 'standard.' Class III firms receive the full 'notional' price (which in their case still leaves them below standard). There may still remain some producers who, even with the full 'notional' price, still earn less than 25 per cent. of their 1936—7 standard *over all their operations.* These Class IV firms may apply to a committee for supplementary assistance to bring their profits up to 25 per cent. of standard. Finally there is a fifth category of firms who make losses on their heavy section taken by itself. These Class V firms may apply to the committee to have that specific loss made good, whatever the profitability of the other sides of their business. It will be seen that the incentive to efficiency varies between the classes of firms. For

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[1] The maximum price seems, in practice, to be the actual price.

[2] This 'standard' is believed in most cases to be much the same as the E.P.T. standard.

[3] The financing of the difference between the 'notional' price and the Control price is discussed below.

[4] Cost *includes* the levy on producers discussed below. The levy does not affect our argument here.

Class I there is the somewhat weak incentive of 20 per cent. post-war rebate on E.P.T. For Class II there is no incentive, for if their costs rise they are entitled to a higher price, up to the point where this price reaches the ' notional ' price. There is an incentive again for Class III firms, because with the full ' notional ' price they still do not reach ' standard ' profits, and can therefore benefit fully from a reduction of costs of production. For Classes IV and V there is no financial incentive, though the Select Committee was informed that before Class V applications for making good losses were granted ' regard is had to all the factors affecting each case, including the standard of efficiency in production.' (Report p. 72, para. 186 (b) (ii)).

The Select Committee expresses concern about the ' rightness ' of control and contract prices in war-time. The most important test of ' rightness ' is whether the price provides an incentive to make the most economical use of real resources. It will be seen from the above outline that the steel price policy passes the test for Classes I and III, and not for Classes II, IV and V, although, in the Class I case there is only the weak incentive of the 20 per cent. E.P.T. rebate. Thus the ' rightness ' of the policy depends on the division of the firms between the different classes, which will in turn depend on the rate of profit used in calculating the ' notional ' price. If the latter is high, more firms will fall in the first two classes than in the others. If it is low more firms will appear in Class III for which the price policy is ' right.' The attitude of the Select Committee itself is as follows :

> . . . . except in the case of firms which are able to earn more than their standard profits, there must be a wide range within which it makes no difference to a manufacturer's own profit whether he works with full efficiency or not . . . Your Committee does not wish to exaggerate the effect of this. It is a matter on which it is practically impossible to get conclusive evidence, and they recognise, moreover, that all well-managed firms, if only for the sake of maintaining their future competitive position, strive to maintain standards of efficiency, ... even though their efforts may have no effect on their profits during the war years. None the less, it is impossible to avoid the conclusion that the existence of such an arrangement must at least have a tendency to reduce the urgency of pressure for increasing efficiency . . .' (Report p. 74 para. 192).

The Committee make no specific recommendation for a new price policy for steel ; they recommend the formation of a special authority (contained in the Treasury and with an advisory panel) to survey the whole field of contract and control price policy, with a view to establishing ' right ' prices, especially from the point of view of efficiency.

The Select Committee puts another test of ' rightness,' which concerns the long run financial position of the industry.

> ' Can it be assumed, for example, that " right prices " for the various products had been arrived at by the Iron and Steel Federation before the war—a question which is relevant since . . . these prices provided the datum line from which prices under the Control have been built up ? An important incidental question is whether the basis for the valuation of capital assets has been a justifiable one. This is a relevant question if in fixing prices some regard is given to the return on capital. The book value of capital assets may be, from the national point of view, very misleading in this connection if such assets consist of plant which in fact ought to be regarded as obsolete.' (Report p. 68, para. 180).

In the previous article in the BULLETIN it was pointed out that to obtain the ' notional ' price an *arbitrary* margin for profit had to be added to the average cost of production for the industry, and it was suggested that this margin was obtained in the same way as in peacetime, when prices were fixed by the Iron and Steel Federation. The above quotation confirms this view. Before the war (and presumably a similar policy may be expected after the war) prices were obtained by (a) calculating average costs of production for the industry and (b) adding a profit calculated in relation to capital. This method of price formation is subject to criticism. First the inclusion of the high cost producers in the calculation raises the average itself and thus gives the high cost producers a greater chance of survival (while at the same time raising the profits of the low cost producers). Secondly the chances of survival of the high cost producers (and hence the *maintenance* of the high average cost) are the greater, the greater is the margin of profit. *If* the capital is over-valued (e.g. by including capital which is in fact not employed) the price will be *pro tanto* higher. As the Select Committee points out, it does not know whether that was in fact the case, but it is clearly a matter which should be made public.[1]

A SUBSIDY TO THE STEEL INDUSTRY.

The complex of Funds financed by various levies on steel producers was described in the article quoted. Full justice was not done there to the complexity of these arrangements. The Select Committee now provide a fuller account and instance some curious cases: for example certain producers of so-called 'fringe' products (mainly the lighter steel products) obtain compensation from the Prices Fund, which is financed by the heavy section. The most important new information, however, concerns the results of price stabilisation. Prior to 1941 the *Central Fund*, financed by levies on home producers, was maintained to reduce the price of imported steel to the level of the equivalent home produced steel. On 1st November 1940 this fund had a surplus of nearly £3.7 million, due to the raising of higher levies than proved in the event to be necessary to meet the excess cost on imported raw materials. The *Prices Fund* was instituted in January 1941, and was allowed to draw on the Central Fund to cover the difference between the 'notional' price and the Control price;[2] moreover the *Central Fund* (and hence the *Prices Fund*) was taken over on public account. Since January 1941 the requirements of both the Central Fund and the Prices Fund have increased (the latter presumably because of rising costs), and the balance is now becoming exhausted.

> 'The position now is that, if payments continue throughout 1943 on the same basis as for the first six months, the funds will be running on an annual deficit at the rate of about £9 millions . . . That is to say, the Government will be subsidising the Iron and Steel industry at the rate of about £9 millions per annum.' (Report p. 73, para. 182).

The Committee does not object to the subsidy. On the contrary, they point out that the levies, which built up the balance which staved off the need for a subsidy for two years were excessive, and they argue that since many manufacturing prices are obtained by 'marking' up raw material prices, the result of excessive raw material costs had been to raise the money cost of war production unnecessarily.

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[1] This problem is economically similar to that of compensation to the owners of industries taken under public control discussed by Mr. Balogh in this issue of the BULLETIN. If capital assets are over-valued and prices are then related to the excessive capital, *technical* efficiency may be nullified by *economic* inefficiency (which is maintained because of the absence of competition).

[2] Not strictly the difference between these prices because: (a) the full 'notional price is not always paid; (b) sometimes *more* than the 'notional' price is paid.

In the Table below we show the proportion of the Control prices ruling on 1 November 1940 (changes since then have been negligible) which was due to *increases* in the levy since September 1939 for various products. In addition there was a levy of 5s. per ingot ton poured raised on all producers before the war.

Proportion of Control Price due to increase in levies since September 1939.

	%
Pig Iron	2.5
Billets, Blooms and Slabs	23
Bars (Sheet and tinplate)	23
Heavy Sections (a) Plates	22
(b) Rails	22
Shell Steel	22
Sheets (Black)	16
Tinplate	12
Wrought Iron	2

There are two questions: (1) the effect of the levy on producers, (2) the selling price policy with regard to steel.

(1) On an average it seems that between 15 to 20 per cent. of the present control price is taken from producers and then *paid back*: for the levy is counted as a cost in obtaining the 'notional' price. The working of the steel levy is complicated by the existence of the Excess Profit Tax. Let us suppose first that E.P.T. is 100 per cent. and that there are four firms, 1, 2, 3, and 4.[1] Let the costs of production of a particular product (which for simplicity we will call steel) be c_1, c_2, c_3 and c_4 respectively. Let v be the levy and r the profit added to obtain the 'notional' price. Then the 'notional' price $N = \bar{c} + v + r$ where $\bar{c}$ is the average of c_1, c_2, c_3 and c_4. If *all* firms received the full notional price, then the profits of firm 1 would be $N - (v + c_1) = (\bar{c} - c_1) + r$ and similarly for each other firm. In other words the profits of each firm would be *independent* of the levy. In practice not all firms receive the 'notional' price if this price would bring their profits above their standard(profits. Suppose this is the case for Firms 1 and 2 whose standard profits are s_1 and s_2. Then firms 1 and 2 will earn profits s_1 and s_2 and will pay no E.P.T. The Prices Fund will save $(2\bar{c} - c_1 - c_2) + 2r - (s_1 + s_2)$, but as a result the Treasury will forego precisely the same amount of E.P.T. The other firms (3 and 4) continue to receive the 'notional' price.[2] Thus the proceeds of all firms are *independent* of v.[3]

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[1] This example is over-simplified, as will be seen by reference to the first part of this note. Here we assume all firms to be either Class II or Class III. These classes appear to be the predominant ones.

[2] With 20% post-war credit there is a net saving to the Treasury in the long run of

$$\frac{1}{5}\left[(2\bar{c} - c_1 - c_2) + 2r - (s_1 + s_2)\right] \times \left[1 - R\right]$$

where R is the rate of income tax (not yet known) at which post-war credits are charged.

[3] *Unless* the profit r is related in some way to the levy; for example if r is obtained as a percentage added to cost of production *plus* the levy. This seems, however, to be unlikely.

(2) The levy in no way affects producers. What is the effect on consumers? Up to November 1940 the levy was set so high that in fact the Central Fund was accumulating a surplus. Up to this point private consumers were therefore paying an indirect tax on steel (according to the Select Committee, at that time 40% of steel was sold to consumers other than Government contractors). The effect on Government contracts was, as the Committee points out, to inflate the cost of the war programme. By June 1942 the private consumption of steel was down to 10% of the total, so that a smaller sector of industry will benefit by the subsidy now coming into effect. Whether, and to what extent, steel prices should be subsidised we do not discuss here. But since the prime cause of raising the levies (to finance high priced imports) has disappeared because of Lend-Lease, and since also, as we have shown, the levies do not affect domestic producers, it would be sound policy to abolish the levies on producers and to exclude them from the calculation of the 'notional' price. Whether this should be accompanied by a corresponding lowering of the control price (and hence an increase in the subsidy) is debatable. But the abolition of the levies on producers would make it clear what exactly the subsidy is at any given time.

The whole complex of prices in the steel industry is in fact one that needs the most careful examination, not only in relation to the points mentioned above, but to the many other details described for the first time by the Select Committee.

G. D. N. WORSWICK.